

NOTES ON AMERICAN RHYNCOLUS, WITH DESCRIPTION OF A NEW SPECIES (COLEOPTERA, CURCULIONIDAE).

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In the North American fauna, *Rhyncolus* is divisible into two main groups, the first comprising usually larger and more elongate species, similar to the European *ater* (L.), and having, in the male, a densely pubescent patch on the middle part of abdominal sternite 1; in the second group the species are, on the whole, smaller and stouter, and their males lack a pubescent patch on abdominal sternite 1. This paper briefly treats the six American species of group 1.

I am indebted to Guy A. K. Marshall for information on certain Wollaston types in the British Museum; to E. T. Cresson, Jr., for notes on Horn types in the Philadelphia Academy; to J. J. Davis for the opportunity of studying type material of *Rhyncolus carinatus* Blatchley in the Purdue University Collection; and to coworkers for the loan of specimens. Figures 1, 2, and 3 were drawn by Arthur Cushman, staff artist; the dots on the elytra in figure 1 show the location of the striae and do not represent punctures.

Rhyncolus, as interpreted here, dates from 1817, when Germar (Mag. Ent., II, p. 340) listed the name, without description, but in association with one described species, as follows: "*Rhyncolus* Creutz." [Ms. name of Creutzer] "*Hylesinus cloropus* Fab." The combination *Hylesinus chloropus* was used by Fabricius in 1801 (Syst. Eleuth., II, p. 393), where *chloropus* was described, but not as a new species, for Fabricius cites literature references by which the specific name traces back to *Curculio cloropus* L. 1761 (Fauna Suecica), and this, by identity of description, to *Curculio cloropus* L. 1758 (Syst. Nat., Ed. 10, p. 385, No. 69). It appears, accordingly, that the "*chloropus* Fab." (a synonym of *ater*) of the Gemminger and Harold catalogue (*Rhyncolus*), and of the Winkler and Schenkling catalogues (*Eremotes*), should read *chloropus* L., or *cloropus* L. On nomenclatorial grounds, at least, *Curculio chloropus* L. 1758 is thus the genotype of *Rhyncolus* Germar 1817, provided (as is done in the present paper) that Germar's citation, previously quoted, is taken as an "indication," in the meaning of article 25a and opinion 1 of the International Rules of Zoological Nomenclature, sufficiently definite to validate the generic name. In 1937 (Roy. Ent. Soc. London, Proc., VI, 3, p. 54) Marshall proposed another interpretation of *Rhyncolus* based on Germar's later paper (Ins. Spec. Nov., 1824, p. 308).

Rhyncolus macrops, n. sp. (Figs. 1, 2, and 4)

♂, ♀. Length 3-4 mm.; width 1-1.2 mm. Elongate, parallel, red-brown to blackish, the legs, antennae, and usually the vertex of head, and the rostrum in part, paler, prothorax often a little darker than elytra, upper surface shiny, the rostrum and pronotum usually minutely alutaceous. Habitus of *brunneus* Mann., but eyes larger, upper profile of rostrum broadly concave (figs. 2 and 3), and general color darker.

Rostrum a little shorter and thicker than in *brunneus*, subparallel-sided or slightly narrowed from eyes to middle, where it is slightly but abruptly dilated, the apical section of scrobe partially visible from above; epistoma usually emarginate at middle, the left lobe thus formed usually wider and more advanced than the right, the right lobe usually more elevated; center of dorsum of rostrum usually with a shallow impression, which is occasionally small, rounded, and isolated, but oftener broad and vague and forming the apical part of a broad shallow median sulcus, which in a few specimens extends to a point opposite posterior edge of eye, the posterior half of the sulcus, when present, narrower and sometimes reduced to a short, feeble, isolated interocular groove; punctures on rostrum and head small, only moderately dense, those on rostrum sometimes here and there subconfluent longitudinally, those on vertex of head much finer; antenna stouter in male than in female, joint 2 distinct in both sexes; eyes convex. Prothorax a little longer than wide (about 11 to 10), widest behind middle, apical constriction usually traceable across dorsum; dorsal surface with small, not dense punctures, which in different specimens vary in size and spacing so that they are separated by distances from less than, to twice as great as, the diameter of a puncture; an impunctate median line of variable length (but not reaching either base or apex) sometimes present. Elytra a little wider than, and about twice as long as, prothorax, twice as long as wide; striae with regular rows of close-set punctures; intervals moderately convex, each with a row of minute punctures, the striae often deeper and the intervals more strongly convex on declivity than on dorsum. Underside with small, not very dense punctures. Male with a broad median area on sternite 1 and, continuous with it, a narrower median area on base of sternite 2 flattened or broadly, feebly impressed, the punctures in this common area smaller and denser than laterally, and bearing long, fine, slanting, pale-yellowish hairs which, in oblique side light, form a conspicuous golden patch; sternite

5 densely punctate, more densely so in apical half, and with rather long pale-yellowish hairs, the vestiture sometimes more or less completely wanting (apparently through abrasion). Female with base of abdomen slightly convex, the first two sternites subevenly punctate from side to side; apical half of sternite 5 more densely punctate than base, and with hairs much as in male.

Type.—Male, United States National Museum Cat. No. 57915.

Type locality.—Mount Lyall, Quebec, 1,500 feet, July 6, 1933, W. J. Brown.

Distribution (paratype).—(CN = Canadian National Collection, H = Ralph Hopping Collection, F = collection of C. A. Frost, MCZ = Museum of Comparative Zoology, S = collection of G. Stace Smith, USNM = United States National Museum, Ut = Utah State College Collection.) CANADA: Quebec (Mount Lyall, W. J. Brown, CN); (Gaspé, E. B. Watson, dry balsam, CN and USNM); (Laniel, M. B. Dunn, CN); (Duparquet, G. Stace Smith, *Pinus* and on lake driftwood, S. and USNM); Ontario (Michipicoten Island, Lake Superior, Hubbard and Schwarz Collection, USNM); Nova Scotia (Round Hill, CN); British Columbia (Terrace, Mrs. M. E. Clark, F. and USNM); (Stanley, K. Graham, *Abies lasiocarpa*, H. and USNM); (Lorna, H. Richmond, *Abies lasiocarpa*, H); (Midday Valley, Merritt, K. F. Auden, H); (Trinity Valley, U. R. Howell, *Pseudotsuga taxifolia*, H); (Steelhead, H. B. Leech, *Abies amabilis*, H).

UNITED STATES: Maine (Waldoboro, in rotten fir stump, USNM); New Hampshire (N. H., MCZ); (White Mts., Woods, MCZ); (Mt. Wash[ington], Blan[chard], MCZ); New York (Cranberry Lake, *Abies balsamea*, USNM); Michigan (Marquette, Hubbard and Schwarz Collection, USNM); (Grand Ledge, Hubbard and Schwarz Collection, USNM); Colorado (Jones Ranch, Durango, *Pinus ponderosa*, H); (Boulder, Casey Collection, USNM); (Longmont, 10,500 feet, dead fir, USNM); Utah (Logan Canon, Wm. P. Nye, *Abies lasiocarpa*, USNM and Ut); New Mexico (Casey Collection, USNM); Wyoming (Saratoga, *Pinus flexilis*, USNM); Washington (Satsop, Burke, *Abies grandis*, USNM); (Metaline Falls, *Pinus*, USNM); (Longmire, R. L. Furniss, in base of dead *Abies grandis*, one specimen among a large series of *Rhyncolus brunneus*, USNM); Oregon (Siskiyou, F. P. Keen, *Pinus monticola*).

Nearest to *brunneus* Mann. with which it has sometimes been confused. The two differ as shown in the key. Specimens of

macrops have been returned to several museums and correspondents under the manuscript name *simulus*.

KEY TO SPECIES OF RHYNCOLUS OF GROUP 1.

(The antennal difference mentioned in couplet 3, though an important taxonomic character, fails in occasional specimens.)

Male with dense patch of pubescence on middle of abdominal sternite 1 1

Male without such a pubescent patch; western U. S. (smaller species not treated here)

1. Red brown to piceous black, elytral intervals evenly convex, not carinate on dorsum, and each with a submedian row of fine punctures; intervals 3 and 9 coalescent near apex of elytron, the apex of 7 either separated from 9 or joined thereto, but in any case 7 and 9 do not coalesce into the base of a short, broad, apical costa; joint 2 of funicle distinct, not so deeply embedded in 1 (figs. 4 and 5); epistoma usually emarginate near middle, the left lobe thus formed usually wider and more advanced than the right lobe 2

Piceous black to black, usually more coarsely punctured species; elytral intervals usually not evenly convex, at least 4, 5, and 6 on dorsum sometimes carinate along their inner margins; intervals 7 and 9 coalescent some distance from apex of elytron and there merging into a broad, often irregular costa which extends parallel to side margin and cuts across apex of 3 to join apex of 2 or 1; joint 2 of funicle very short, deeply embedded in 1 (fig. 7) (except in *cylindricollis* in which the elytral carinae are well developed); epistoma not or feebly emarginate, if emarginate the right lobe usually more advanced than the left 3

2. Rostrum slightly longer, profile of its dorsum straight or feebly convex (fig. 3); eyes smaller; punctures on prothorax above larger and denser; elytral intervals a little narrower, striae punctures, in side light, appearing larger, and more quadrate in outline; male with the pubescent patch at base of abdomen confined to sternite 1. Length 2.8–4.6 mm.

brunneus Mann.

Rostrum shorter, profile of its dorsum broadly concave (fig. 2); eyes larger; punctures on prothorax above smaller and sparser; elytral intervals slightly wider, the striae punctures appearing smaller and more definitely rounded; male with the pubescent patch at base of abdomen present on both sternites 1 and 2. Length 3–4 mm. *macrops* Buch.

3. Joint 2 of funicle, 2 or 2.5 times as wide as long, less deeply embedded in 1 (fig. 6); some of dorsal intervals of elytra, especially 4, 5, and 6, with their inner margins elevated and appearing finely but distinctly carinate, the surface of these intervals, beginning at the carinae, sloping transversely downward to the next succeeding stria in a straight or nearly straight line; sides of prothorax nearly always broadly rounded; rostrum a little longer and, both in dorsal and lateral views, more distinctly tapering from base to apex; punctures on elytral intervals only slightly larger than in *brunneus*; apical costa of elytra not very prominent. Pacific Coast. Length 3.3–4.2 mm. . . *cylindricollis* Woll.
- Antennae stouter, joint 2 deeply embedded in 1 (more deeply so in male) and with its visible portion 3 or 4 times as wide as long (fig. 7); dorsal intervals not or more feebly carinate, the general surface of intervals 4, 5, and 6 rather more convex; sides of prothorax straight or nearly so, or emarginate, slightly converging from near base to about apical fourth; rostrum shorter, scarcely thinner toward apex than at base, sides in dorsal view subparallel or at least not usually so plainly converging towards apex. Dorsal punctation coarser 4
4. Length 3–3.6 mm.; elytra in dorsal view with some fine but usually distinct murications on the lateral outline behind the middle (the murications are on interval 7); hairs on elytral declivity longer; eastern half of the United States. *discors* Csy.
- Average size larger; elytra without or with bare traces of lateral murications; hairs on elytral declivity shorter; western half of the United States 5
5. Length 3.3–4.4 mm.; punctures on elytral intervals coarser, especially towards apex; apical costa of elytra less prominent, not extending basad, on interval 7, past the junction of intervals 7 and 9 (though at this point merging with a lower and narrower costa on interval 7); on the elytral declivity, intervals 2, 3, and 4 are narrower, more strongly convex, and more roughly sculptured, and the striae deeper and wider, than on dorsum; prothorax above with the lateral punctures denser than in *nimius* and sometimes irregularly confluent; chiefly along Pacific Coast. *oregonensis* Horn
- Length 3.8–5 mm.; punctures on intervals a little smaller; apical

costa more prominent and extending basad, on interval 7, a short distance past the junction of intervals 7 and 9; intervals and striae on elytral declivity about as they are on dorsum; prothorax above with lateral punctures less dense; Arizona, New Mexico, Colorado *nimius* Csy.

NOTES ON SYNONYMY AND DISTRIBUTION.

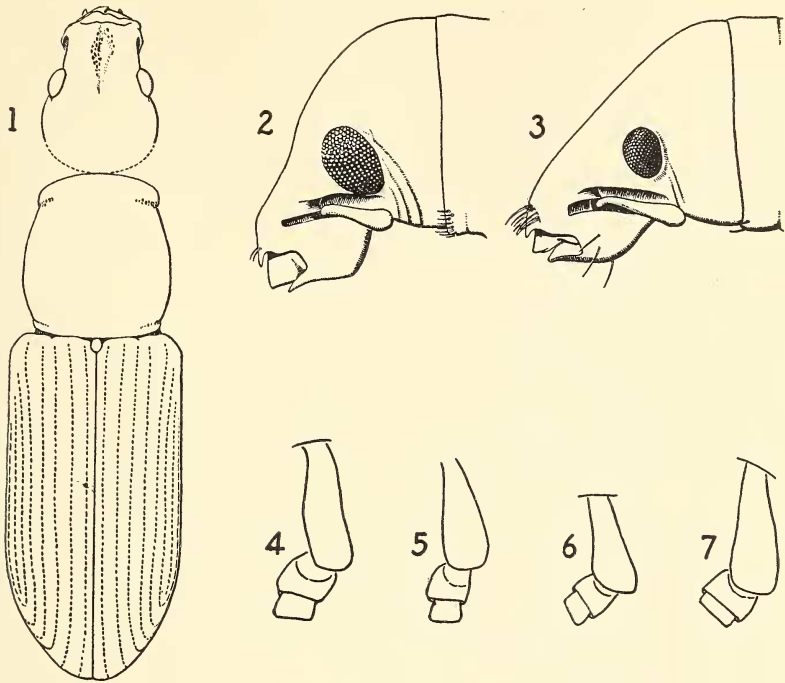
The three names preceded by an asterisk should be added to the American list. Synonyms are placed in parentheses.

(*Rhyncolus carinatus* Blatchley, 1916), type locality Kosciusko County, Ind., belongs in *Phloeophagus*, new combination, and = *Phloeophagus minor* Horn, 1873, described from Pennsylvania, District of Columbia, and Nebraska. New synonymy. I have examined the type of *carinatus* and authentic specimens of *minor*.

Rhyncolus (relictus) Casey, 1892), type locality New Mexico, = *R. brunneus* Mannerheim, 1843, type locality Sitka, Alaska. New synonymy. Casey's three New Mexican examples of *relictus*, though smaller than the average sized *brunneus*, agree with small specimens of that species from other places. *R. brunneus* ranges from Alaska south to California, Arizona, and New Mexico and eastward, in Canada and the northern United States, to the Atlantic coast. No specimens have been seen from Minnesota or the Dakotas or adjoining parts of Canada, but this probably indicates incompleteness of collections rather than an actual break in distribution.

*Rhyncolus (*Californicus)* Wollaston, 1873), Ent. Soc. London, Trans., p. 645, type locality California, = *R. brunneus* Mann., 1843. New synonymy. A California specimen of *brunneus* agrees well with Wollaston's type of *californicus*; comparison made by Sir Guy Marshall.

*Rhyncolus *cylindricollis* Wollaston, 1873, l. c., p. 645, type locality California. In American collections this species has been confused with *R. oregonensis*, some specimens of which resemble it closely. Compared with *oregonensis* its smoother and more polished elytral intervals, and more sharply defined elytral carinae are often distinctive. Specimens of *cylindricollis* now at hand are from Lake Tahoe, Mariposa County, Big Tree Grove in Mariposa County, Yosemite Park, Truckee, Sisson, Monterey, and Pyramid Rangers Station, Calif.; Nevada; Hood River, Prineville, and Forest Grove, Oreg.; Longmire and Mount Adams, Wash.; Coeur d'Alene, Idaho; Salt Lake, Utah; and Sanca and Creston, British Columbia. Several records suggest that it sometimes occurs in association with *oregonensis*.



EXPLANATION OF FIGURES OF RHYNCOLUS.

FIG. 1.—Female *macrops*, Terrace, British Columbia. FIG. 2.—Same. FIG. 3.—Female *brunneus*. FIG. 4.—Scape and first two joints of funicle of male *macrops*, Terrace, British Columbia. FIG. 5.—Same for male *brunneus*, Rampart House, Alaska. FIG. 6.—Same for male *cylindricollis*, Lake Tahoe, Calif. FIG. 7.—Same for male *oregonensis*, Prineville, Oreg.

Rhyncolus oregonensis Horn, type locality Oregon, ranges from British Columbia south to California. Eastwardly a few specimens have been seen from Montana, Idaho, and Colorado. A short series from Black Hills and near Elmore, S. Dak., is tentatively referred to *oregonensis*, though the specimens are, in some ways, intermediate between *oregonensis* and *discors*.

Rhyncolus nimius Casey, type locality Las Vegas, N. Mex. Specimens examined from Williams, Flagstaff, Santa Catalina Mountains, and Chiricahua Mountains, Ariz.; Las Vegas, N. Mex.; and Colorado Springs, El Paso County, and Uncompahgre National Forest, Colo.

Rhyncolus discors Casey, type locality Crescent City, Fla. In the original description only Florida is mentioned, but Casey's type is labeled Crescent City, Fla. The smaller of Casey's two examples is 3 mm. long, the 2.8 mm. length stated by Casey evidently excluding the head. The few specimens of *discors* examined are from Bogalusa and Pouchatoula, La.; Crescent City, Baldwin, and Quincy, Fla.; Savannah and Milner, Ga.; Durham, N. C.; Onville and Falls Church, Va.; Berwyn, Laurel, and Glen Echo, Md.; McCulloch's Mills, Pa.; and Grand Ledge, Mich.

*Rhyncolus *protensus* Wollaston, 1873, l. c., p. 647, type locality California. This species does not seem to be represented in the National Museum collection. It is described as black, shiny, and 2 lines long, the same length as stated for *cylindricollis*. The rostrum is longer than in *Cylindricollis* and *oregonensis* ("longiusculo"), and parallel-sided; and Sir Guy Marshall has informed me that the prothorax is subconical, the sides being straight in the anterior two-thirds, and without an apical constriction; also, that the punctures on the prothorax are much finer and sparser than in *Phloeophagus californicus* Van Dyke.